

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of claims:

Claims 1-25. (Canceled)

Claim 26. (Previously presented) A method for detecting an analyte in a fluid sample comprising:

(a) mixing said fluid sample with a reagent comprising a capturing agent which is a first member of a binding couple that can bind to an analyte, the analyte being a second member of the binding couple, such that if the analyte is present in the fluid sample, particulates of the binding couple are formed;

(b) treating said mixture so as to form on a solid substrate a thin layer of said particulates, if formed as a result of said mixing;

(c) obtaining an optical image of the thin layer; and

(d) analyzing said optical image so as to determine therefrom the absence or presence of particulates formed as a result of the association between the binding couple, the presence of particulates in the sample indicating the presence of said analyte in the sample; or to determine from said image at least one parameter of said particulates.

Claim 27. (Currently amended) The method of Claim claim 26, wherein said analyte comprises at least two recognition recognition sites and said capturing agent comprises at least two capturing moieties, such that particulates of binding couples are formed by association of a recognition site of said analyte with a capturing moiety of said capturing agent.

Claim 28. (Currently amended) The method of Claim claim 26, wherein said parameter is selected from the group consisting of particulate size, size distribution of the particulates, number of particulates formed, shape of the particulates, and spatial distribution of the particulates from: particulate size; size distribution of the particulates; particulates' count; shape of the particulates; or spatial distribution of the particulates.

Claim 29. (Currently amended) The method of Claim claim 26, wherein said image is a magnified image of said thin layer of said mixture.

Claim 30. (Currently amended) The method of Claim claim 29, wherein said magnification of the image is achieved by the use of a light microscope lens.

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Claim 31. (Currently amended) The method of Claim claim 26, wherein said analyte is a particle comprising on its surface two or more copies of a recognition site with which a capturing agent can associate, thereby forming particulates of said binding couple.

Claim 32. (Currently amended) The method of Claim claim 31, wherein said particle is a cell or a microorganism presenting on their surface said recognition sites.

Claim 33. (Currently amended) The method of Claim claim 32, wherein the recognition site is an antigen and said capturing agent is an antibody having affinity to said antigen.

Claim 34. (Currently amended) The method of Claim claim 26, wherein said reagent comprises microbeads having a sensing interface, the sensing interface carrying two or more copies of a capturing moiety such that if said analyte is present in the fluid sample, particulates of binding couples are formed by association of said capturing moieties on said microbead with recognition sites of said analyte; analyte.

Claim 35. (Currently amended) The method of Claim claim 34, wherein said sensing interface carries two or more copies of a same capturing moiety.

Claim 36. (Currently amended) The method of Claim claim 34, wherein said sensing interface carries two or more copies of different capturing moieties.

Claim 37. (Currently amended) The method of Claim claim 34, wherein said microbeads are affinity microbeads.

Claim 38. (Currently amended) The method of Claim claim 37, wherein said microbeads are immunobeads.

Claim 39. (Currently amended) The method of Claim claim 26, wherein said thin layer comprises a monolayer of particulates of said binding couple.

Claim 40. (Withdrawn) A system for performing the method of Claim 26, the system comprising:

(a) holding means for holding a solid substrate carrying a thin layer of particulates;

(b) an optical image acquisition device for capturing an image of the thin layer on the solid substrate;

(c) an image analysis device coupled to said image acquisition device and for analyzing an image obtained by the image acquisition device.

Claim 41. (Withdrawn) The system of Claim 40, wherein said analyte comprises at least two recognitions sites and said capturing agent comprises at least two capturing moieties, such that particulates of binding couples are formed by association of a recognition site of said analyte with a capturing moiety of said capturing agent.

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Claim 42. (Withdrawn) The system of Claim 40, wherein said parameter is selected from: particulate size; size distribution of the particulates; particulates' count; shape of the particulates; or spatial distribution of the particulates.

Claim 43. (Withdrawn) The system of Claim 40, wherein said analyte is a particle comprising on its surface two or more copies of a recognition site with which a capturing agent can associate, thereby forming particulates of said binding couple.

Claim 44. (Withdrawn) The system of Claim 40, wherein said particle is a cell or a microorganism presenting on their surface said recognition sites.

Claim 45. (Withdrawn) The system of Claim 40, wherein the recognition site is an antigen and said capturing agent is an antibody having affinity to said antigen.

Claim 46. (Withdrawn) The system of Claim 40, wherein said reagent comprises microbeads having a sensing interface, the sensing interface carrying two or more copies of a capturing moiety such that if said analyte is present in the fluid sample, particulates of binding couples are formed by association of said capturing moieties on said microbead with recognition sites of said analyte;

Claim 47. (Withdrawn) The system of Claim 40, wherein said sensing interface carries two or more copies of a same capturing moiety.

Claim 48. (Withdrawn) The system of Claim 40, wherein said sensing interface carries two or more copies of different capturing moieties.

Claim 49. (Withdrawn) The system of Claim 40, wherein said microbeads are affinity microbeads.

Claim 50. (Withdrawn) The system of Claim 40, wherein said microbeads are immunobeads.

Claim 51. (Withdrawn) The system of Claim 40, wherein said thin layer comprises a monolayer of particulates of said binding couple.

Claim 52. (Withdrawn) The system of Claim 40, further comprising a magnifying device.

Claim 53. (Withdrawn) The system of Claim 52, wherein said magnifying device comprises a light microscope lens.

Claim 54. (Withdrawn) The system of Claim 53, wherein said magnifying device is a light microscope.

Claim 55. (Withdrawn) The system of Claim 40, wherein said optical image acquisition device is a camera.

Claim 56. (Withdrawn) The system of Claim 40, wherein said image acquisition device is coupled to a magnifying device.

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Claim 57 (Withdrawn) The system of Claim 40, wherein the image analysis comprises determination of one or more a parameter of particulates formed within the thin layer, the parameter selected from size of particulates, size distribution of particulates, particulates' count; particulates' shape and spatial distribution of the formed particulates.

Claim 58. (Withdrawn) A kit for use in the method of Claim 26, the kit comprising:

(a) at least one reagent comprising a capturing agent being a first member of a binding couple and comprising at least two capturing moieties to which binds an analyte, if present in a tested fluid sample, the analyte being a second member of the binding couple,

(b) a solid substrate for carrying a thin layer of particulates.

Claim 59. (Withdrawn) The kit of Claim 58, wherein said solid substrate is a microscope slide or a testing chamber.

Claim 60. (Withdrawn) The kit of Claim 58, wherein said solid support is adapted for use in combination with an optical image acquisition device.

Claim 61. (Withdrawn) The kit of Claim 58, comprising means for creating said thin layer.